



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/849,579	05/20/2004	Gerald C. DiPiazza	Tyco.005	6347

7590 04/17/2008
Tyco Technology Resources
Suite 140
4550 New Linden Hill Road
Wilmington, DE 19808-2952

EXAMINER

STEPHEN, EMEM O

ART UNIT	PAPER NUMBER
----------	--------------

2617

MAIL DATE	DELIVERY MODE
-----------	---------------

04/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/849,579	DIPIAZZA, GERALD C.	
	Examiner	Art Unit	
	EMEM STEPHEN	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 2/4/2008.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-26 and 28 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 1-22 is/are allowed.
 6) Claim(s) 23-26 and 28 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 20 May 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/04/2008 has been entered.

Allowable Subject Matter

2. Claims 1-22 are allowed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. **Claim 23** is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Publication No. 2004056457 A to Ami et al. in view of Yarkosky.

Regarding claim 23, Ami discloses an apparatus comprising a communication module (millimeter wave transmitter 22 and receiver 23A-C) mountable to the side of a building and the communication module is configured to: receive a radio signal (see fig. 3, and par. 21) from another communication module located on the side of the building, the radio signal originating from an elevation different than the communication module; (see figure 1, and pars. 21, signals originating from antenna 31-33) and propagated at least one substantially downward along an outside surface of the building (signal transmitted from millimeter wave transmitter 22 to receiver 23 are transmitted substantially downward along an outside surface of the building); and transmit the radio signal into the building (see fig. 1, receiver 23 transmit signal into building to be received by receiver set 42-43), wherein the radio signal communicated within the building to a transceiver (col. 4 lines 10-15) is a different type of signal than the radio signal communicated along the outside surface of the building (col. 3line 55-col. 4 line 9).

However, Ami fails to disclose transmit the radio signal substantially upward along an outside of the building.

Yarkosky discloses transmit the radio signal substantially upward along an outside of the building (see figures 1, 5, and col. 3 lines 55-58, uplink signal 22 is transmitted substantially downward along an outside of the building).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Ami, and have the radio signal such that the radio waves communicating the radio signal propagate at least one of substantially upward along an outside of the building as disclosed by Yarkosky for the purpose of transmitting it through to the communication modules.

6. **Claim 24** is rejected under 35 U.S.C. 103(a) as being unpatentable over Ami in view of Yarkosky, and further in view of Takatori.

Regarding claim 24, the combination of Ami and Yarkosky discloses the apparatus and method of claim 23, wherein the radio signal carries at least one of an up-converted mobile communication signal, an up-converted and a down-converted legacy wireless communication signal (Yarkosky col. 6 lines 42-48, down convert and up convert downlink signal). However, the combination fails to disclose a millimeter wave radio signal. Takatori discloses a millimeter wave radio signal (col. 2 lines 54-62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination, and have a millimeter wave radio signal as taught by Takatori for the purpose of increasing transfer speed of wireless communication (col. 2 lines 1-14).

7. **Claim 25** is rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Publication No. 2004/0176027 A1 to O'Neill in view of U S Pub. 2004/0198386 A1 to Dupray.

Regarding claim 25, O'Neill discloses a method comprising: receiving a radio signal at a communication module, wherein the communication module is mounted to the side of a building (see figure 1, and par. 45, repeater system 20 located near the window receives signals from base station), wherein the radio signal originated from an elevation different than the communication module; and transmitting the radio signal into the building (see figure 1, and pars. 45-47, signals that are received from base station by repeater system 20 are transmitted to subscriber unit inside the building).

However, O'Neill fails to disclose the signal is encoded with a predetermined code based on the elevation from which the signal was transmitted and services priorities.

Dupray discloses the signal encoded with a predetermined code (par. 464, 512, 519, and 541) based on the elevation (pars. 30, 92, 236, and 349) from which the signal was transmitted and services priorities (pars. 38, 620, 652, and 672). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of O'Neill, and have the signal encoded with a predetermined code based on the elevation from which the signal was transmitted and services priorities as disclosed by Dupray for the purpose of using transmitted signal in determining the location of a person in the building.

8. **Claims 26, and 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neill in view of Dupray, and further in view of Yarkosky, and further in view of Takatori.

Regarding claims 26, and 28, the combination of O'Neill and Dupray discloses the apparatus and method of claim 25, wherein the signal includes an indication of a floor of the building from which the signal was transmitted (Dupray, pars. 30, 92, 236, and 349), however, the combination fails to disclose wherein the radio signal carries at least one of an up-converted mobile communication signal, an up-converted and an down-converted legacy wireless communication signal.

In a similar endeavor, Yarkosky discloses wherein the radio signal carries at least one of an up-converted mobile communication signal, an up-converted and a down-converted legacy wireless communication signal (col. 6 lines 42-48, down convert and up convert downlink signal). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination, and have the radio signal carries at least one of an up-converted mobile communication signal, an up-converted and an down-converted legacy wireless communication signal as taught by Yarkosky for the purpose of transmission through a building. However, Yarkosky fails to disclose a millimeter wave radio signal.

Takatori discloses a millimeter wave radio signal (col. 2 lines 54-62). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination, and have a millimeter wave radio signal as taught by Takatori for the purpose of increasing transfer speed of wireless communication.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EMEM STEPHEN whose telephone number is 571 272 8129. The examiner can normally be reached on 8-5 Mon-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on 571 272 7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/EMEM STEPHEN/
Examiner, Art Unit 2617
ES

/Charles N. Appiah/
Supervisory Patent Examiner, Art Unit 2617